

ABSTRACT OF THE DISCLOSURE

A method for determining the quality of plant material by making chlorophyll fluorescence images of the material by scanning the material with a beam of electromagnetic radiation so that the chlorophyll present is excited, and measuring the chlorophyll fluorescence with an imaging detector. From the fluorescence images obtained with a fast and a slow scan, the image of the quantum efficiency of the photosynthetic system of the plant material is calculated. A device for measuring the chlorophyll fluorescence images and a method and devices for sorting and classifying plant material are also described.